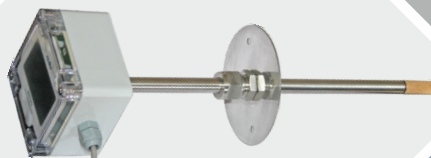
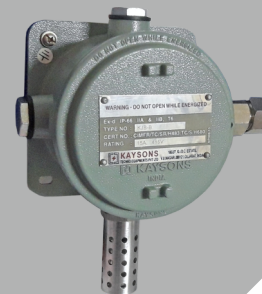
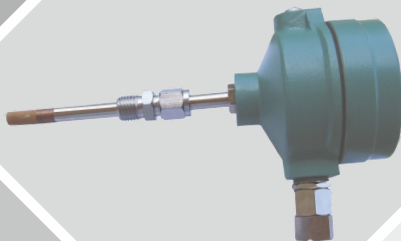
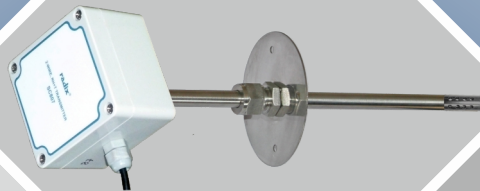




# 2-WIRE, RH/DEWPOINT+T TRANSMITTERS

2 x 4~20 mA OUTPUTS • IP65/IP66 • DUAL LCD DISPLAY • FLAMEPROOF

SC805, SC806, SC807



## 2-WIRE, RH/DEWPOINT+T TRANSMITTERS



SC80X accurately measures humidity using capacitive sensor technology & temperature using band gap sensor technology.

It generates upto two, 2-wire mA outputs that can be assigned to RH or T or Dewpoint using optional 7 segment LCD display and keys or remote display module or PC based configurator. Wall mount, duct mount or remote sensor versions available.

### FEATURES

#### Transmitter features

- 2 analog outputs with true 2-wire operation
- Any output can be assigned to RH, T or Dewpoint
- The loop drop of 4.5 V is the lowest among such products
- Both outputs are isolated from each other
- Dual row 7-segment LCD option to display RH & Temperature or Dewpoint (SC805)
- Parameter configuration via PC configurator using USB to Serial Converter DCC501
- For flameproof version, the heavy-duty metal tube construction and IP66 protection allows use in rough industrial environments

#### Humidity & temperature sensor features

- Replaceable wall mount, duct mount or remote RH+T sensor option available
- Remote sensor option can be used where space is limited
- Wiremesh RH+T sensor option (See Fig 5)
- Long term stability of RH+T sensor
- Protected solder pads of sensor for anti corrosion
- Sensor is condensation resistant
- Sintered bronze filter cap, stainless steel or wiremesh option

### APPLICATIONS

- Clean room monitoring
- HVAC/building monitoring
- Green house monitoring
- Process system monitoring
- Air economizers, Air quality monitor

## 2-WIRE, RH/DEWPOINT+T TRANSMITTERS

### SPECIFICATIONS

All specifications at ambient of 25 °C, 24VDC unless specified otherwise

<p><b>INPUT</b></p> <p>Sensor type RH                      Capacitive Temperature        Semiconductor (Band gap)</p> <p>Range limits</p> <p>Default calibration Normal                0~100% RH, non-condensing                              0~50 °C (0~158 °F) for temperature                              0~50 °C (0~158 °F) for dewpoint                              -40~120 °C (-40~248 °F)                              (See fig.1) for temperature                              -40~120 °C (-40~248 °F) for dewpoint</p> <p>Maximum              0~100% RH : 4~20mA                              0~50 °C : 4~20mA Other calibration ranges, eg. 25~95 %RH &amp; 0~75 °C, can be programmed through USB to Serial Converter DCC501</p> <p>Standard calibration</p> <p>Display                Dual 7-segment, 4-digit, 0.5"                              (12.7 mm) LCD (For SC805)</p>	<p><b>OUTPUTS</b></p> <p>Current output Output1                2-wire, 4~20 mA (RH or T or Dewpoint) Output2                2-wire, 4~20 mA (RH or T or Dewpoint) Permissible load     800 W @ 24 V DC, 20 mA Current limit         ~22 mA</p> <p><b>ACCURACY</b></p> <p>Linearity &amp; calibration                    ± 3% RH <b>For higher accuracy of 1% RH or 2% RH contact sales</b> ± 0.5 °c for temperature and ± 1 °c for dewpoint Temperature effect on accuracy        ± 0.5% of span / 25 °C Supply voltage effect                    ± 0.002% of span / V Supply ripple effect,                    50/60 hz, 5 Vp - p</p> <p><b>POWER SUPPLY</b></p> <p>Supply voltage                                6~32 V DC loop supply</p> <p><b>TEMPERATURE, HUMIDITY</b></p> <p>Ambient, storage                          -20 to +70 °C Ambient, operation                        -10 to +50 °C Relative humidity                          0 ~ 100% RH</p> <p><b>MECHANICAL</b>                                See Table 1</p>
<p><b>MONITORING</b></p> <p>Sensor break detection</p> <p>Upscale current                              ~22 mA Downscale current                            ~3.9 mA</p>	

### TABLE1 - MECHANICAL

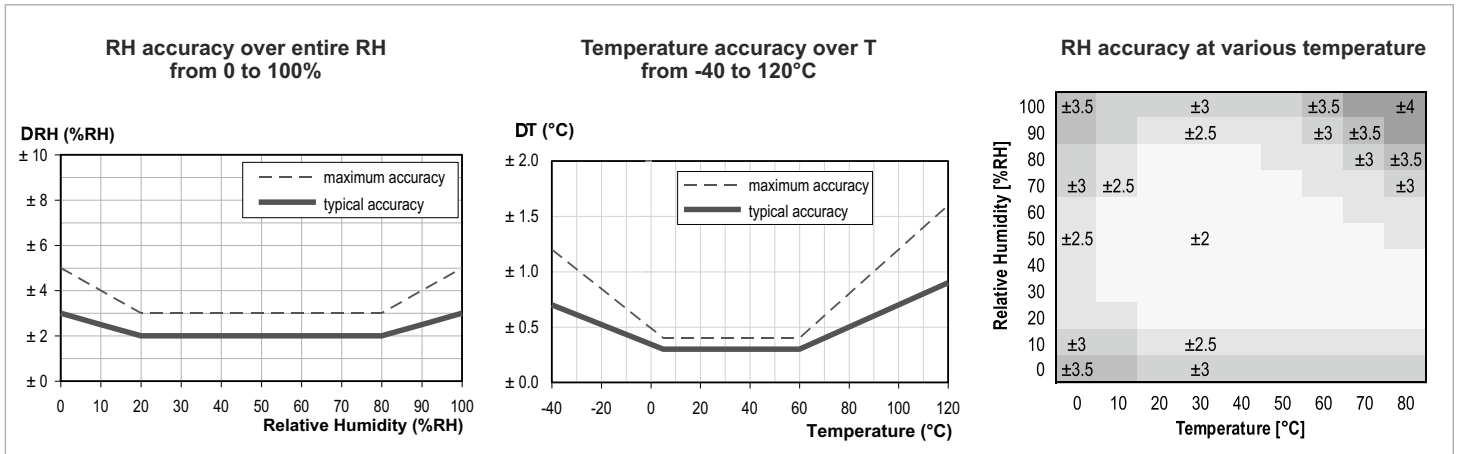
Parameters	Wall mount	Duct mount	Flameproof wall mount	Flameproof duct mount
Dimensions (in mm)	See Fig 3 & 5	See Fig 4	See Fig 6	See Fig 7
Enclosure housing	ABS plastic	ABS plastic	LM6, pressure die-cast	LM6, pressure die-cast
Protection	IP65	IP65	IP65	IP66
Cable gland	PG7, suitable for cable dia 3 to 6.5 mm	PG7, suitable for cable dia 3 to 6.5 mm	1/2" NPT threading gland	1/2" NPT threading gland
Certification	-	-	Flameproof for gas group I, IIA & IIB	Flameproof for gas group I, IIA & IIB
Sensor housing Material	SS304 sensor tube or wiremesh filter ø12mm, length 70mm	SS304 sensor tube with flange ø12mm, length 300mm	SS304 ø25mm, length 50mm	SS304 with adjustable flange ø12mm, length 300mm
Size				

## 2-WIRE, RH/DEWPOINT+T TRANSMITTERS

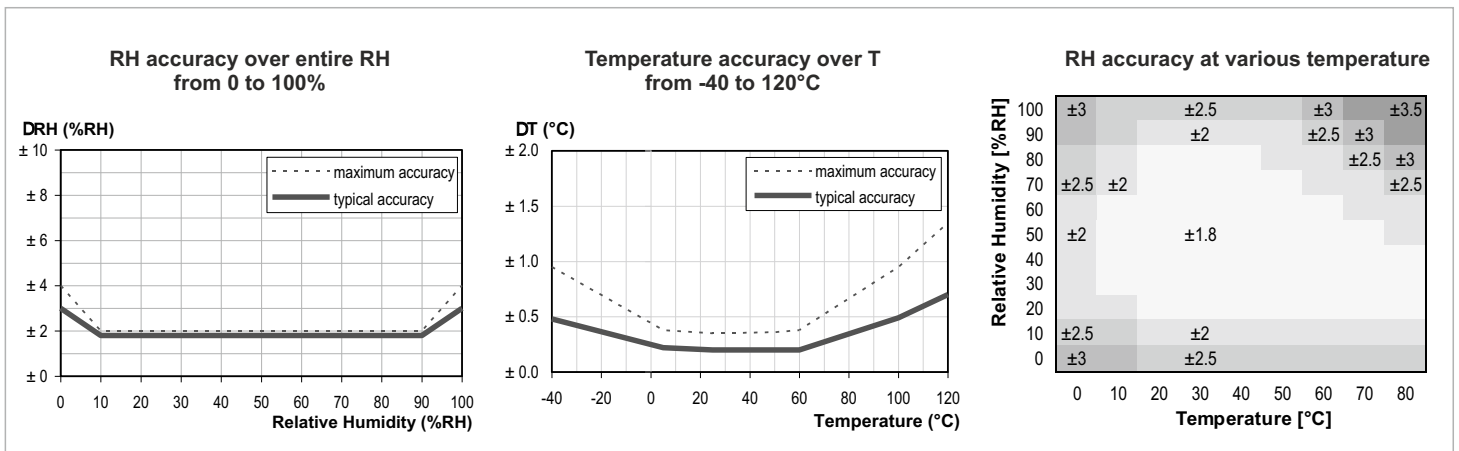
### ACCURACY OF HUMIDITY & TEMPERATURE

Fig 1

#### 3% Accuracy



#### 2% Accuracy



### OUTPUT LOAD

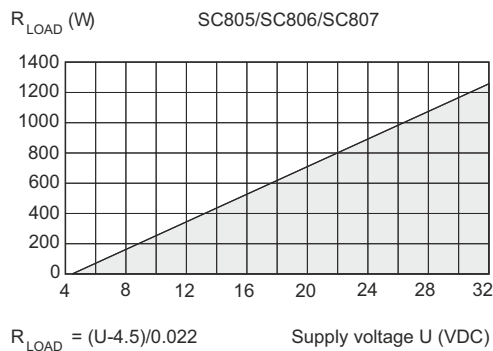
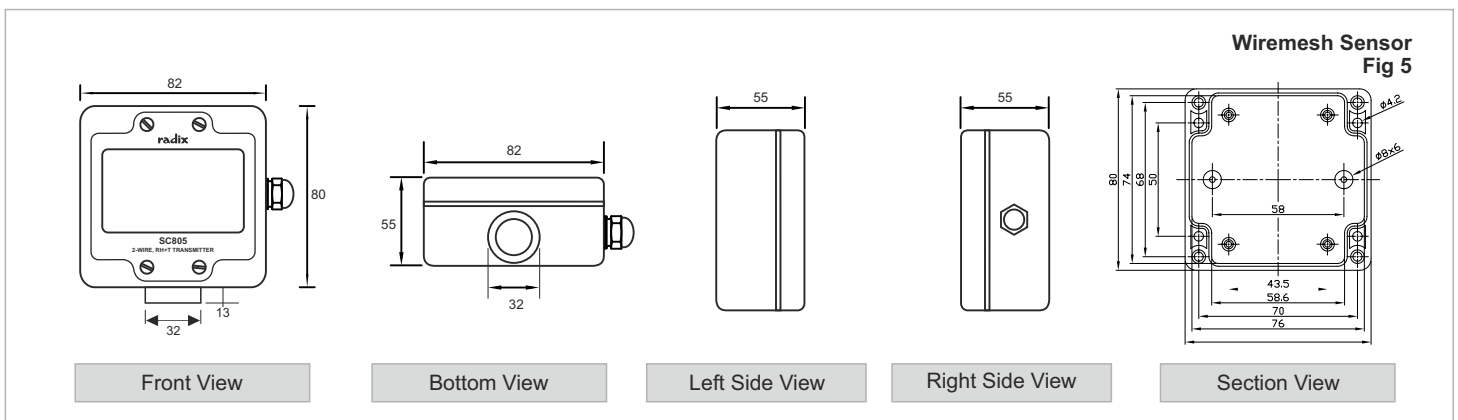
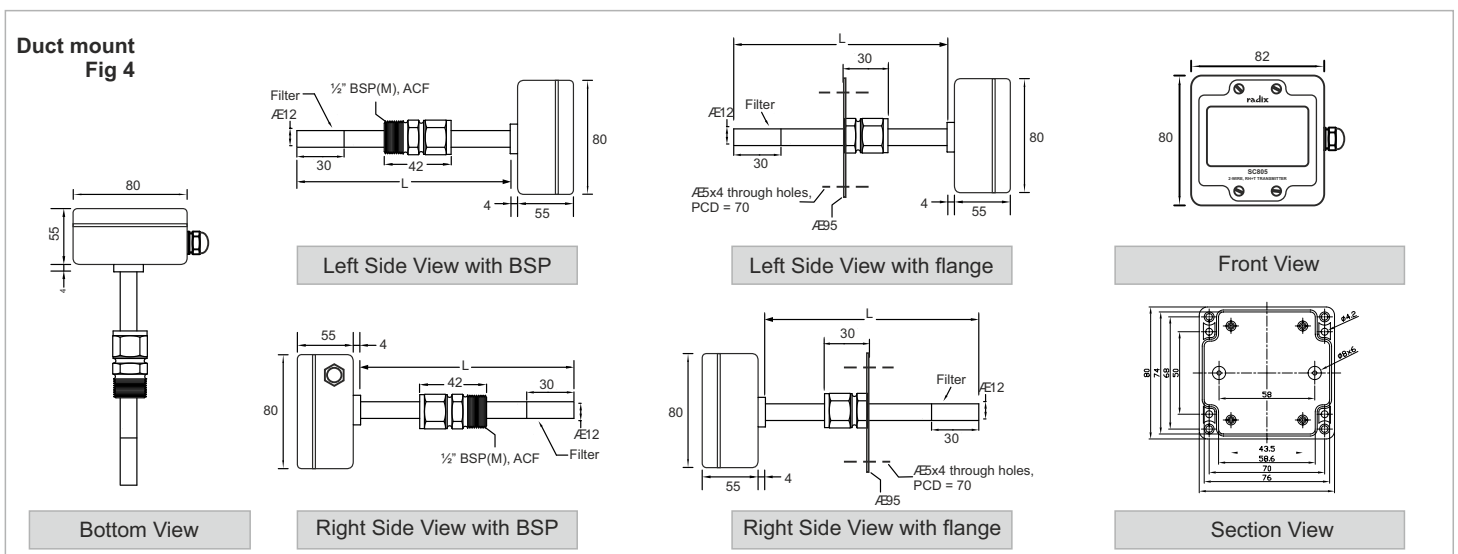
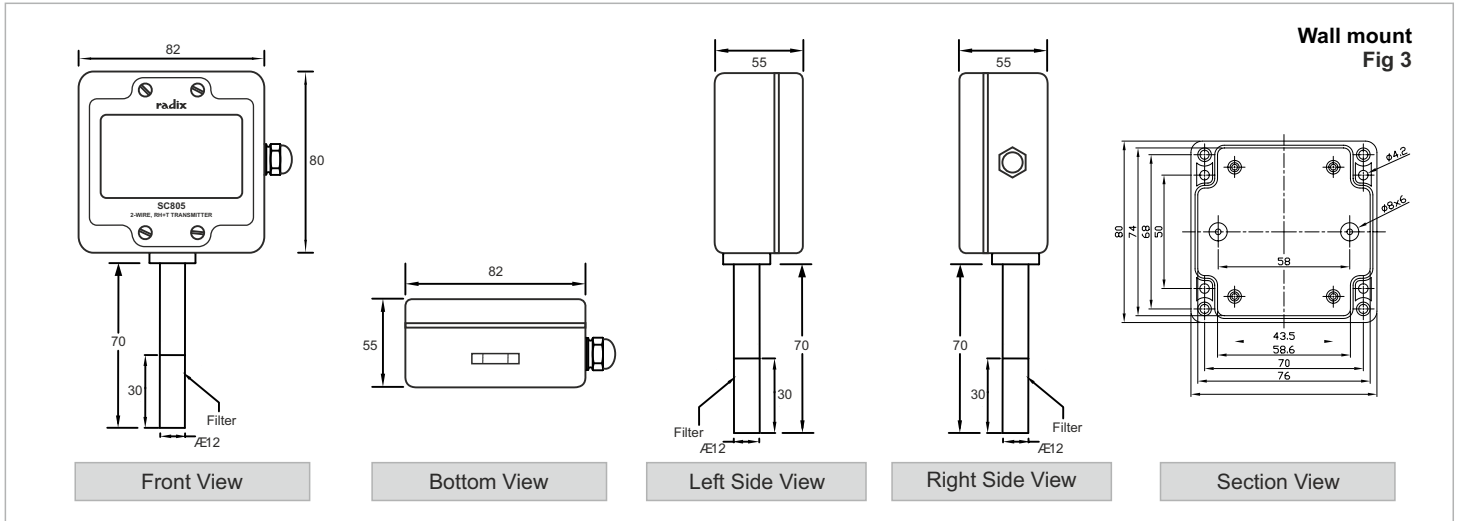


Fig 2

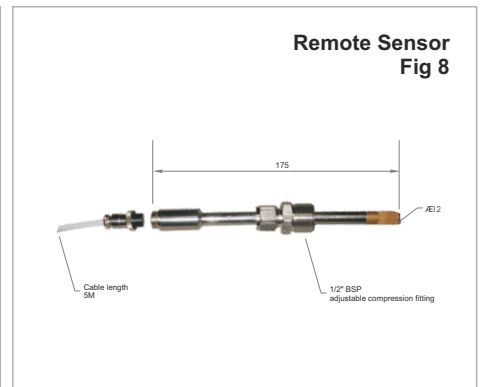
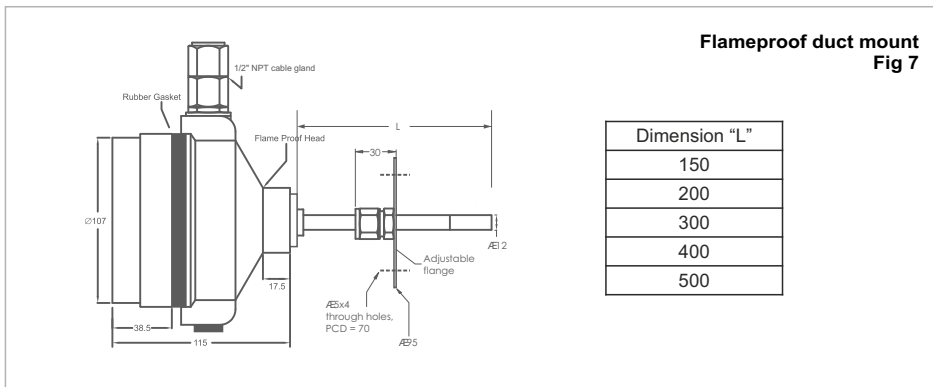
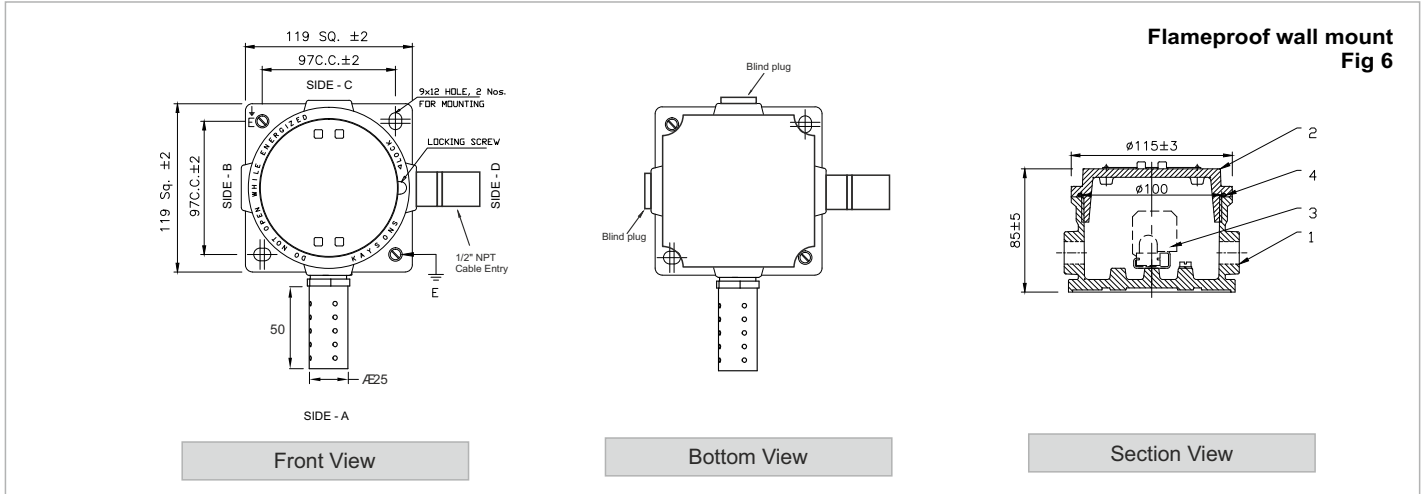
## 2-WIRE, RH/DEWPOINT+T TRANSMITTERS

### DIMENSIONS mm



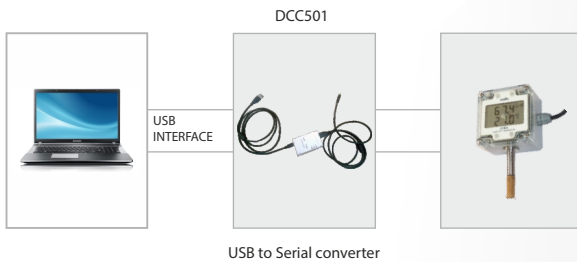
## 2-WIRE, RH/DEWPOINT+T TRANSMITTERS

### DIMENSIONS mm

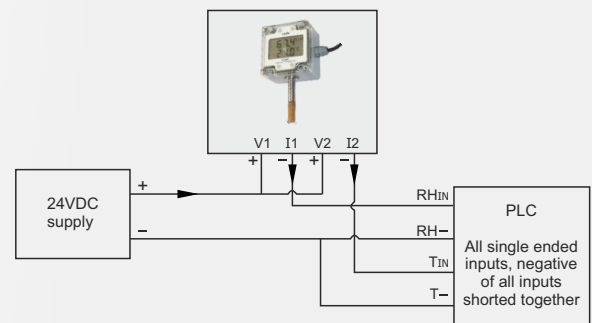


### PC CONFIGURATOR

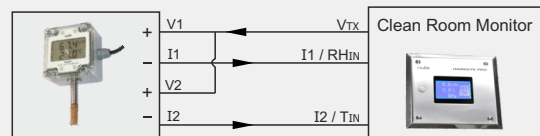
DCC501 USB to Serial converter can be used to program the parameters. The Programmer DCC501 must be purchased separately.



### CONNECTION DIAGRAM



Note : Supply voltage to V1 & I1 is mandatory.  
In case only one O/P require then V1 & I1 terminal to be used one o/p to be assigned to RH or T as per requirement.



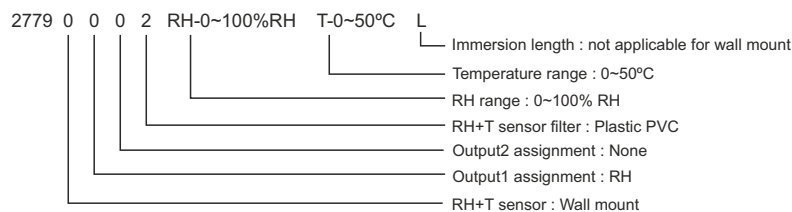
# 2-WIRE, RH/DEWPOINT+T TRANSMITTERS

## ORDERING INFORMATION

### MODEL : SC805

Example	2779	0	0	0	2	RH	T	L	
Product code	2779								
RH+T sensor	0								Wall mount (see fig.3)
	1								Duct mount with adjustable flange (see fig.4)
	2								Duct mount with adjustable compression fitting (see fig.4)
	3								Wall mount with wiremesh sensor (see fig.5)
	4								Remote duct mount sensor (see fig.8)
Output1 assignment		0							RH
		1							Temperature
		2							Dewpoint
Output2 assignment			0						None
			1						RH
			2						Temperature
			3						Dewpoint
RH+T sensor filter				0					Sintered bronze
				1					Stainless steel
				2					Plastic PVC
RH range					RH				Please specify range for RH within the range limits
Temperature range						T			Please specify range for T within the range limits
Immersion length for duct mount sensor in mm								L	Default length is 300mm. User can specify a different length (See special order codes)

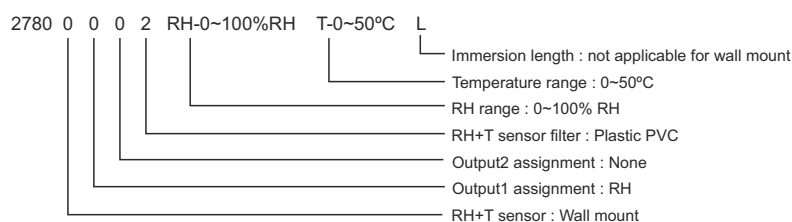
### EXAMPLE / DEFAULT ORDER CODE



### MODEL : SC807

Example	2780	0	0	0	2	RH	T	L	
Product code	2780								
RH+T sensor	0								Wall mount (see fig.3)
	1								Duct mount with adjustable flange (see fig.4)
	2								Duct mount with adjustable compression fitting (see fig.4)
	3								Wall mount with wiremesh sensor (see fig.5)
	4								Remote duct mount sensor (see fig.8)
Output1 assignment		0							RH
		1							Temperature
		2							Dewpoint
Output2 assignment			0						None
			1						RH
			2						Temperature
			3						Dewpoint
RH+T sensor filter				0					Sintered bronze
				1					Stainless steel
				2					Plastic PVC
RH range					RH				Please specify range for RH within the range limits
Temperature range						T			Please specify range for T within the range limits
Immersion length for duct mount sensor in mm								L	Default length is 300mm. User can specify a different length (See special order codes)

### EXAMPLE / DEFAULT ORDER CODE



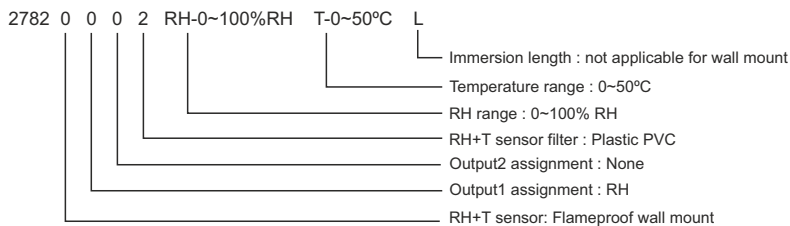
## 2-WIRE, RH/DEWPOINT+T TRANSMITTERS

### ORDERING INFORMATION

#### MODEL : SC806

Example	2782	0	0	0	2	RH	T	L	
Product code	2782								
RH+T sensor		0							Flameproof wall mount (see fig.6)
		1							Flameproof duct mount with adjustable flange (see fig.7)
		2							Flameproof duct mount with adjustable compression fitting
Output1 assignment			0						RH
			1						Temperature
			2						Dewpoint
Output2 assignment				0					None
				1					RH
				2					Temperature
				3					Dewpoint
RH+T sensor filter					0				Sintered bronze
					1				Stainless steel
					2				Plastic PVC
RH range						RH			Please specify range for RH within the range limits
Temperature range							T		Please specify range for T within the range limits
Immersion length for duct mount sensor in mm								L	Default length is 300mm. User can specify a different length (See special order codes)

#### EXAMPLE / DEFAULT ORDER CODE



#### PC CONFIGURATOR

Parameter	Model	Order Code
USB-to-Serial Converter	DCC501	2555

#### SPECIAL ORDER CODES

A. Tube length for duct mount 'L'	0	100 mm
	1	300 mm
	2	450 mm
	3	User specified
B. Cable length for remote sensor	0	5 meter
	1	10 meter
	2	15 meter
	3	20 meter

#### ENQUIRIES

**Instruments:** sales@radix.co.in  
**Sensors:** sensors@radix.co.in  
**Gauges:** gauges@radix.co.in  
**Automation:** automation@radix.co.in  
**Level:** level@radix.co.in

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